

Dr. Duke's Phytochemical and Ethnobotanical Database

Chemicals Found in *Cnicus benedictus*

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
30	(+)-CATECHIN	Plant	--	--		Jim Duke's personal files.
3	ABSINTHIN	Plant	--	--		Jim Duke's personal files.
10	ALPHA-AMYRIN	Plant	--	--		
10	ALPHA-AMYRIN	Shoot	--	--		Jim Duke's personal files.
2	ALPHA-AMYRIN-ACETATE	Plant	--	--		Newall, C. A., Anderson, L. A. and Phillipson, J. D. 1996. <i>Herbal Medicine - A Guide for Health-care Professionals</i> . The Pharmaceutical Press, London. 296pp.
5	ALUMINUM	Plant	11.3	85	-0.5880215511088723	
4	APIGENIN-7-GLYCOSIDE	Plant	--	--		List, P.H. and Horhammer, L., <i>Hager's Handbuch der Pharmazeutischen Praxis</i> , Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
22	ARCTIGENIN	Plant	--	--		
4	ARCTIIN	Seed	--	--		List, P.H. and Horhammer, L., <i>Hager's Handbuch der Pharmazeutischen Praxis</i> , Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
1	ARTEMISIIFOLIN	Plant	--	--		Newall, C. A., Anderson, L. A. and Phillipson, J. D. 1996. <i>Herbal Medicine - A Guide for Health-care Professionals</i> . The Pharmaceutical Press, London. 296pp.
112	ASCORBIC-ACID	Plant	4	30	-0.5866429815331944	
7	ASTRAGALIN	Shoot	--	--		Jim Duke's personal files.
24	BENZALDEHYDE	Shoot	--	--		Jim Duke's personal files.

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
20	BENZOIC-ACID	Plant	--	--		Wichtl, M. 1984. Teedrogen. Ein Handbuch fur Apotheker und Arzte. Wissenschaftliche Verlagsgesellschaft mbH Stuttgart. 393 pp.
53	BETA-CAROTENE	Plant	18	133	-0.006865949688543744	
47	BETA-SITOSTEROL	Seed	243	243	-0.5377265608091442	Jim Duke's personal files.
47	BETA-SITOSTEROL	Plant	--	--		
102	CAFFEIC-ACID	Plant	--	--		Jim Duke's personal files.
28	CALCIUM	Plant	1490	11200	-0.2555852720073188	
2	CAMPESTEROL	Plant	--	--		Jim Duke's personal files.
24	CHROMIUM	Plant	0.2	1.8	-0.69528381757724	
60	CINNAMALDEHYDE	Flower	--	--		Jim Duke's personal files.
60	CINNAMALDEHYDE	Leaf	--	--		Jim Duke's personal files.
60	CINNAMALDEHYDE	Shoot	--	--		Jim Duke's personal files.
60	CINNAMALDEHYDE	Plant	--	--		Wichtl, M. 1984. Teedrogen. Ein Handbuch fur Apotheker und Arzte. Wissenschaftliche Verlagsgesellschaft mbH Stuttgart. 393 pp.
53	CITRAL	Shoot	--	--		Jim Duke's personal files.
53	CITRAL	Essential Oil	--	--		Wichtl, M. 1984. Teedrogen. Ein Handbuch fur Apotheker und Arzte. Wissenschaftliche Verlagsgesellschaft mbH Stuttgart. 393 pp.
20	CITRONELLAL	Shoot	--	--		Jim Duke's personal files.
15	CITRONELLOL	Shoot	--	--		Jim Duke's personal files.
10	CNICIN	Plant	2000	7000		
10	CNICIN	Shoot	2000	7000		Jim Duke's personal files.

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
10	CNICIN	Leaf	100	18000		Jim Duke's personal files.
2	COBALT	Plant	0.5	3.8	-0.35327499797790946	
4	COSMOIIN	Shoot	--	--		Jim Duke's personal files.
10	CUMINALDEHYDE	Shoot	--	--		Jim Duke's personal files.
5	DAUCOSTEROL	Shoot	--	--		Jim Duke's personal files.
6	FENCHONE	Plant	--	--		Wichtl, M. 1984. Teedrogen. Ein Handbuch fur Apotheker und Arzte. Wissenschaftliche Verlagsgesellschaft. mbH Stuttgart. 393 pp.
6	FENCHONE	Shoot	--	--		Jim Duke's personal files.
61	FERULIC-ACID	Plant	--	--		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
61	FERULIC-ACID	Shoot	--	--		Jim Duke's personal files.
15	FIBER	Plant	98000	98000	-0.9227393238771348	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
6	IRON	Plant	3.2	24	-0.7100395587228927	
1	LABIATIC-ACID	Plant	--	--		Leung, A.Y., Encyclopedia of Common Natural Ingredients Used in Food, Drugs, and Cosmetics, John Wiley & Sons, New York, 1980.
10	LIGNANS	Plant	--	--		Bisset, N.G., ed. 1994. Herbal Drugs and Phytopharmaceuticals. CRC Press. Boca Raton, FL. 566 pp.
27	LINOLEIC-ACID	Seed	56160	65520	-0.3564517509177292	List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
3	LITHOSPERMIC-ACID	Fruit	--	--		

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78	LUTEOLIN	Shoot	--	--		Jim Duke's personal files.
78	LUTEOLIN	Plant	--	--		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
65	MAGNESIUM	Plant	235	1770	-0.7128475273587387	
14	MANGANESE	Plant	0.3	2.1	-0.679853846010259	
3	MUCILAGE	Plant	15960	200000	0.6200059608641451	
1	N-NONACOSANE	Shoot	308	308		Jim Duke's personal files.
1	N-NONACOSANE	Seed	--	--		Jim Duke's personal files.
1	N-NONACOSANE	Plant	--	--		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
39	NIACIN	Plant	0.4	3.1	-1.0316455776809799	
11	NICOTINIC-ACID	Plant	--	--		Newall, C. A., Anderson, L. A. and Phillipson, J. D. 1996. Herbal Medicine - A Guide for Health-care Professionals. The Pharmaceutical Press, London. 296pp.
11	NICOTINIC-ACID	Leaf	--	--		Jim Duke's personal files.
64	OLEANOLIC-ACID	Plant	--	--		
64	OLEANOLIC-ACID	Shoot	--	--		Jim Duke's personal files.
18	OLEIC-ACID	Seed	159840	186480	0.5538748797301541	List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
16	P-CYMENE	Shoot	--	--		Jim Duke's personal files.

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16	P-CYMENE	Essential Oil	--	--		Wichtl, M. 1984. Teedrogen. Ein Handbuch fur Apotheker und Arzte. Wissenschaftliche Verlagsgesellschaft. mbH Stuttgart. 393 pp.
4	PHOSPHORUS	Plant	359	2700	-0.42703250934882114	
14	POTASSIUM	Plant	3458	26000	0.29309751910799225	
15	RIBOFLAVIN	Plant	0.3	2.1	-0.6488992795262795	
87	RUTIN	Plant	--	--		Jim Duke's personal files.
60	SELENIUM	Plant	0.5	3.4	-0.2757875215710519	
4	SILICON	Plant	--	--		
1	SODIUM	Plant	162	1220	-0.23654338092027774	
5	STARCH	Plant	10640	80000	-0.8427953808926898	
12	STIGMASTEROL	Shoot	--	--		Jim Duke's personal files.
12	STIGMASTEROL	Seed	--	--		Jim Duke's personal files.
12	STIGMASTEROL	Plant	--	--		
35	TANNIN	Plant	--	80000	-0.053082229266390064	
31	THIAMIN	Plant	2.7	2.7	-0.41649042777166784	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
4	TIN	Plant	3.3	25	0.28122309319446065	
12	TRACHEOGENIN	Plant	--	--		Jim Duke's personal files.
12	TRACHEOGENIN	Fruit	--	--		Bisset, N.G., ed. 1994. Herbal Drugs and Phytopharmaceuticals. CRC Press. Boca Raton, FL. 566 pp.
89	URSOLIC-ACID	Plant	--	--		Jim Duke's personal files.

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77	ZINC	Plant	--	--		